
The Problem of *De Se* Attitudes

An Introduction to the Issues and the Essays

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If Smith says ‘I am hungry’, then she makes a *de se* assertion and expresses a *de se* belief, that is, an assertion and a belief that are irreducibly about the way she herself is. If Jones says ‘Smith believes that she herself is hungry’, he attributes a *de se* belief to Smith. More generally, *de se* attitudes are those that we express with ‘I’ or other first-person pronouns, and those that we attribute to others with emphatic reflexives such as ‘she herself’ and ‘he himself’ (and with certain other constructions where appropriate). *De se* attitudes do not merely lurk at the margins of our psychology and our discourse about it, they are everywhere. And yet they raise challenging problems concerning the nature of the content of our attitudes, and the proper analysis of belief reports and other attitude attributions. This volume collects together new essays, by linguists and philosophers, examining these problems. Although the division is to a certain extent arbitrary, the book is divided into two parts: the first has to do with a cluster of issues in linguistics and the philosophy of language, and the second with issues in the epistemology and metaphysics of attitude content. In this introduction, we discuss the problem of *de se* attitudes and several of the classic papers devoted to it, and so we hope that this book might serve as a stand-alone volume on the topic.

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1 The Problem of *De Se* Attitudes

There are at least two interconnected problems associated with *de se* attitudes. One of them is a semantic, or broadly linguistic, problem. Consider the following:

- (1) Obama believes that Obama is tall.
- (2) Obama believes that the president of the USA is tall.
- (3) Obama believes that he is tall.
- (4) Obama believes that he himself is tall.

Suppose that Obama is suffering from temporary amnesia, so that in some ordinary sense he does not realize that he is Obama, does not realize that he is the president of the USA, and does not realize that he is tall. Suppose also that, while amnesic, Obama looks at a photograph of a group of people, among them a tall man who is identified by the caption as Barack Obama, the president of the USA.

In the imagined scenario, utterances of (1) and (2) would be true. But an utterance of (4) would clearly not be true. Moreover, while it might be the case that an utterance of (3) has a reading on which it is equivalent to an utterance of (4), that is, a *de se* reading, such a reading is not obligatory even in cases where ‘he’ is anaphoric to the subject, ‘Obama’. For example, in uttering (3) a speaker might be reporting that Obama has a belief about a certain man, who, unbeknownst to Obama happens to be Obama himself – and in virtue of looking at the photograph, he does indeed have such a belief. So, there is at least a sense in which (3) also does not entail (4). The non-entailment goes the other way as well. We can imagine scenarios in which (4) is true, but in which (1), (2), and (3) on its non-*de se* reading are false. The main linguistic problem, then, is to account for the semantic difference between *de se* attitude reports like (4), on the one hand, and reports like (1)-(3) on the other.

One way to summarize this problem is to ask: How does the meaning of an emphatic reflexive like ‘he himself’ in the complement of an attitude report differ from that of a co-referential proper name, definite description, or pronoun? (A related problem, or perhaps a different face of the same problem, concerns the difference in meaning between the first person pronoun and other co-referential terms.) The problem is challenging for several reasons, perhaps the strongest being the fact that whatever we take the realm of meanings of subject terms to be, it would seem to be *exhausted* by the meanings we assign to proper names, definite descriptions, and pronouns. If this is the case, then it seems there is nothing else the emphatic reflexive can mean.

The linguistic problem of *de se* attitudes just sketched is sharpest when set within a particular framework for belief, which will set the stage for the psychological version of the problem. (Indeed some would argue that in the absence of such a framework, *de se* attitudes do not constitute a *problem* at all.) According to this framework, a cognitive attitude such as belief is a two-place relation between a subject and a proposition, the truth or falsehood of which does not vary from person to person or from time to time. When such a relation is instantiated, the relevant proposition is the content of the attitude.

With this framework in mind, let's reconsider (4) above:

(4) Obama believes that he himself is tall.

The framework of propositional attitudes, unless it is adorned with additional machinery, cannot easily make sense of the belief that is attributed to Obama in an utterance of (4). This is because it seems plausible that Obama could believe the proposition *that Obama is tall* without believing that he himself is tall. He might, as in the amnesia example above, fail to realize that he himself is Obama. Moreover, it is plausible that for any property *F*, Obama could believe the proposition *that the F is tall* without believing that he himself is tall. He might not believe that he himself is the one and only individual who has *F*, for example, even if he is that individual. Every candidate for content available on the framework seems to misrepresent or fail to pin down the content of Obama's belief.

To summarize the main psychological problem: if Obama does not realize that he himself is Obama, then he can believe *de se* that he is tall without believing that Obama is tall; and if he does not realize that he himself is the *F*, for any property *F*, then he can believe *de se* that he is tall without believing that the *F* is tall. As a result, it seems that Obama's *de se* belief cannot be identified with any belief of the form *x is tall*, where *x* is any name or definite description that designates Obama, and so his belief must have a different content than any belief of that form. The problem, in general, is to identify the content of a given *de se* belief and thereby distinguish it from beliefs that are not *de se*.

Before turning to some classic discussions of *de se* attitudes in the literature, we would like briefly to consider one more problem about *de se* belief. This problem is probably the first to be explicitly posed, by Peter Geach (1957). Geach formulates it like this: "if we say of a number of people that each of them believes that he himself is clever, what belief exactly are we attributing to all of them? Certainly they do not all believe the same proposition, as 'proposition' is commonly understood by philosophers" (1957: 23). The imagined belief report seems to attribute the same belief to each of the people, and certainly the predicate 'believes that he himself is clever' is true of each of them. But the intuitive sense in which different

people can share the same *de se* belief seems difficult to capture, especially given the propositional framework discussed above.

2 Some Classic Sources on *De Se* Attitudes

2.1 Castañeda

In the middle to late 1960s, Hector-Neri Castañeda published a series of papers focusing on the use of indexicals and demonstratives in attitude reports, and in particular focusing on attributions of self-knowledge and other *de se* attitudes. In his seminal 1966 paper, “‘He’: A Study in the Logic of Self-Consciousness”, Castañeda discusses uses of the pronominal ‘he’ in attributions of self-knowledge, which normally have the following linguistic structure: *S knows that she herself (he himself) is F*. Castañeda introduces the term ‘he*’ – a so-called *quasi indicator* – to abbreviate ‘he’ as it occurs in attributions of self-knowledge and the like, which he labels “the *S*-use of ‘he’” (1966: 130). ‘He*’ thus disambiguates ‘he’, identifying the cases in which a *de se* reading is required. So, for example, Castañeda would render (4) above, and the *de se* reading of (3), as follows:

(5) Obama believes that he* is tall.

Using several clever and engaging examples, Castañeda forcefully argues that ‘he*’ is an essential indexical in that it cannot be replaced in an attribution like (5) by any of the following: (a) a pronominal that refers to Obama, (b) a description that denotes Obama, (c) a proper name for Obama, (d) a deictic, (e) the pronominal ‘I’. What should be emphasized, and what is perhaps most important to Castañeda’s project, is that in attributions of *de se* attitudes ‘he*’ cannot be replaced with a definite description or with a demonstrative pronoun.

Let’s take a look at one of Castañeda’s own examples. Consider (6) below:

(6) The Editor of *Soul* knows that he* is a millionaire.

In an utterance of (6), the token of ‘he*’ is not a proxy for the description ‘the Editor of *Soul*’. To show this, Castañeda imagines the following: “The Editor of *Soul* may know that he himself is a millionaire while failing to know that he himself is the Editor of *Soul*, because, say, he believes that the Editor of *Soul* is poverty-stricken Richard Penniless” (1966: 134-35). So, the Editor of *Soul* can believe that he himself is a millionaire without believing that the Editor of *Soul* is a millionaire. The converse entailment also fails. “To see this,” writes Castañeda, “suppose that on January 15, 1965, the man just appointed to the Editorship of *Soul* does not yet know of his appointment, and that he has read a probated will by which an eccentric businessman bequeathed several millions to the man who happens to be the

Editor of *Soul* on that day” (1966: 135). Here, the Editor believes that the Editor of *Soul* is a millionaire, but does not believe that he himself is.

Analogously, we should not be inclined to use (7) below, or (8) with a deictic use of ‘he’, to express (6):

(7) The Editor of *Soul* knows that this man is a millionaire.

(8) The Editor of *Soul* knows that he is a millionaire.

In one of Castañeda’s examples (1966: 130), the Editor of *Soul* knows something about the man whose photograph lies on a certain table, but he does not know that he himself is the man in the photograph. In such a case, we can imagine the Editor looking at himself in the photograph, assenting to ‘This man is a millionaire’ and ‘He is a millionaire’, but failing to be disposed to assent to ‘I am a millionaire’. (We could also imagine the case with a mirror instead of a photograph.) It is clear that a speaker can utter (7) or (8), making reference to the Editor of *Soul*, without also committing herself to (6). So, ‘he*’ as it occurs in (6) cannot be replaced with ‘this man’ or with the deictic ‘he’. Neither (7) nor (8) entails (6). The extension of Castañeda’s reasoning to similar conclusions about proper names and genuine pronominals is straightforward.

With respect to the linguistic problem of *de se* attitudes, Castañeda uses these considerations to motivate the view that occurrences of ‘he*’ are “unanalyzable; they constitute a peculiar and irreducible mechanism of reference to persons” (1968: 447). The idea is that ‘he*’ cannot be analyzed, even partly, in terms of the semantics associated with definite descriptions, demonstratives, other pronouns, and the like. (Strictly speaking, only occurrences of ‘he*’ that Castañeda labels *degree 1* are unanalyzable. In certain iterated attitude attributions, there are occurrences of higher degree. However, these are analyzed partly in terms of degree 1 occurrences, and so every attribution of a *de se* attitude will have at least one unanalyzable occurrence of ‘he*’.)

Castañeda’s early account addresses the problem of *de se* attitudes, but it leaves several questions unanswered. We will not go into much detail here, but it is plausible to attribute to him a broadly Fregean view of the workings of ‘I’ and ‘he*’. Some support for this comes from the following:

[W]hen Privatus asserts “The Editor of *Soul* believes that he* is a millionaire”, Privatus does not attribute to the Editor the possession of any way of referring to himself aside from his ability to use the pronoun ‘I’ or his ability to be conscious of himself. The latter ability is the only way of referring to himself that Privatus must attribute to the Editor for his statement to be true. (1966: 138)

This and other passages seem to suggest that each person grasps a special sense, a special first-personal mode of referring to himself. When the Editor

of *Soul* says ‘I am a millionaire’, the pronoun ‘I’ expresses the Editor’s special first-personal sense. When Privatus says ‘The Editor of *Soul* knows that he* is a millionaire’, the reflexive pronoun ‘he*’ expresses a sense such that the reference of this sense is the Editor’s special first-personal sense.

This sort of view solves the linguistic problem of *de se* belief from within the framework of propositions – in particular, within the framework of the view that *belief and other cognitive attitudes are simply two-place relations between conscious subjects and propositions*. It distinguishes attributions of self-knowledge (and *de se* attributions more generally) from others by postulating a class of special senses associated with the pronoun ‘I’, every one of which differs from the senses of co-referential terms that do not contain ‘I’. Reference is made to such senses by devices like ‘he*’ when they occur in the complement sentences of attitude reports.

This sort of view solves the psychological problem by identifying the sort of proposition to which a given subject is related when she has a *de se* attitude. We cannot express a proposition of this sort by uttering a sentence that contains a proper name or definite description (that does not itself contain a first person pronoun), but it was wrong to look to such propositions for a solution to the problem. The content of a *de se* attitude is simply a proposition that one would express if one were to say ‘I am such-and-such’, which is constituted by the speaker’s special first-personal sense. One might object that this sort of view cannot solve Geach’s problem of shared *de se* belief, since – in virtue of a difference in reference – the belief that the Editor of *Soul* expresses by saying ‘I am a millionaire’ is a different proposition than the belief that Obama expresses by saying ‘I am a millionaire’. But perhaps good sense might be made of the idea that, although the two propositions are different, they are tokens of the same *type* of proposition, which accounts for the intuitive sameness of the beliefs.¹

2.2 Perry

In his extremely insightful and influential 1979 paper ‘The Problem of the Essential Indexical’, John Perry presents the case of the messy shopper. Like Castañeda’s examples, this case poses a challenge for the view that belief is irreducibly a two-place relation between a conscious subject and a proposition. Perry describes the example as follows:

I once followed a trail of sugar on a supermarket floor, pushing my cart down the aisle on one side of a tall counter and back along the aisle on the other, seeking the shopper with the torn sack to tell him he was making a mess. With each trip around the counter, the trail became thicker. But I seemed unable to catch up. Finally it dawned on me. I was the shopper I was trying to catch. (1979: 3)

¹ For an excellent exposition and critical discussion of Castañeda’s work, see Perry (1983).

The challenge is to pick out two propositions: first, the one Perry believed before the truth dawned on him (the content of the belief he would have expressed by saying something like ‘The shopper who left this trail of sugar is making a mess’); and second, the one he later comes to believe (the content of the belief he would express by saying ‘I am making a mess’). Perry makes this need more vivid by noting that the second belief has a special sort of motivational force. It explains a change in his behavior, a change that the first belief cannot even partly explain:

I believed at the outset that the shopper with a torn sack was making a mess. And I was right. But I did not believe that I was making a mess. That seems to be something I came to believe. And when I came to believe that, I stopped following the trail around the counter, and rearranged the torn sack in my cart. (1979: 3)

We explain why Perry stopped to rearrange the bag of sugar in part by conveying information about the relevant change in his beliefs. Since the change in belief explains his behavior, it seems that we must be able to provide the propositions to give an account of the change. However, as we have already seen, identifying the proposition that Perry believes when he finally says ‘I am making a mess’, is not a trivial task. The argument lurking around the case of the messy shopper, then, is something like this. Although the change in Perry’s behavior is partly explained by his acquiring a new belief, there is no *proposition* such that Perry’s coming to believe it even partly explains the change. As a result, belief is not (or is not simply) a matter of a two-place relation between a believer and a proposition.

Why think that there is no proposition such that his coming to believe it explains Perry’s behavior? Let’s note first that the use of ‘I’ or ‘he himself’ seems essential to explaining Perry’s behavior. For this reason, Perry (1979: 8) claims that propositions lack an “indexical ingredient” that his belief must have, given its explanatory role. We have already touched on the reasoning here, in the discussion of the problem of *de se* belief. Consider the singular or purely descriptive propositions that a theory of propositions might have to offer. It seems that believing any one of them is consistent with lacking the *de se* belief that the explanation of Perry’s behavior requires.

Let’s take purely descriptive (non-singular, non-object dependent) propositions first. Suppose that we identify a purely descriptive proposition, *P*, and claim that Perry’s coming to believe *P* explains his clean-up behavior. We know a bit about what *P* must be like, given that it is alleged to be both purely descriptive and the content of Perry’s *de se* belief that he himself is making a mess. Proposition *P* must somehow pick out Perry by means of some property (set of properties, uniquely satisfiable condition), and associate this with the concept or property of making a mess. So, for some property *F*, *P* is true if and only if exactly one thing has *F*, and what-

ever has *F* is making a mess. In a nutshell, then, on the current proposal the belief that explains Perry's clean-up behavior is his belief in the proposition *that the F is making a mess*. But it is extremely implausible that such a belief could explain why he begins to clean up. Perry makes this point as follows:

even if I was thinking of myself as, say, the only bearded philosopher in a Safeway store west of the Mississippi, the fact that I came to believe that the only such philosopher was making a mess explains my action only on the assumption that I believed that I was the only such philosopher, which brings in the indexical again. (1979: 8)

The point here is that it seems quite clear that Perry could believe the proposition *that the only bearded philosopher in a Safeway west of the Mississippi is making a mess* without believing that he himself is making a mess, since he could fail to believe himself to be the only bearded philosopher in a Safeway store west of the Mississippi. The same goes for any purely descriptive proposition. So, belief in such a proposition cannot play the explanatory role of Perry's *de se* belief that he himself is making a mess.

Can we say that what explains Perry's behavior is his coming to believe a singular or object-dependent proposition, where truth conditions are not determined descriptively? For example, can we say that Perry's clean-up behavior is explained by his coming to believe the singular proposition *that Perry is making a mess*? There are several reasons why this seems unsatisfactory. First, the most common views according to which people believe singular propositions entail that Perry believed this proposition *before* the truth finally dawned on him. When he started following the trail of sugar, for example, he believed that the shopper who was leaving the trail was making a mess. Since he was this shopper, he had a belief about himself, to the effect that he was making a mess. This, on the most common views allowing belief in singular propositions, means that he believed the proposition *that Perry is making a mess*. Even views on which it is more difficult to believe a singular proposition are in trouble here. This is because we can imagine that Perry perceived himself in some way and took the person he perceived to be making a mess, without believing that he himself was making one. In fact, Perry imagines just this:

Suppose there were mirrors at either end of the counter so that as I pushed my cart down the aisle in pursuit I saw myself in the mirror. I take what I see to be the reflection of the messy shopper going up the aisle on the other side, not realizing that what I am really seeing is a reflection of a reflection of myself. I point and say, truly, "I believe that he is making a mess." (1979: 12)

Of course, if Perry believed the singular proposition *that Perry is making a mess*, and he believed it *before* the truth finally dawned on him,

then his coming to believe it cannot explain his clean-up behavior. Moreover, if following a person's trail of sugar, or seeing him in a mirror, are sufficient for believing a singular proposition, then someone with merely a third-person perspective on Perry could believe the singular proposition *that Perry is making a mess*. And if this is the case, Perry could believe this proposition without believing *de se* that he himself is making a mess. So belief in this proposition could not play the explanatory role of that *de se* belief.

This brings us to what Perry calls "propositions of limited accessibility" (1979: 15-16). It seems that the attempt to explain Perry's behavior in terms of his belief in the relevant singular proposition implies that *only* Perry could believe it, and in general, that any given person can believe propositions that no other person can believe. Perry gives some reasons to resist propositions of limited accessibility. Their relation to genuine *de se* belief is also less than fully clear. For example, why is it impossible for Perry to believe the proposition *that Perry is making a mess* without believing that he himself is making one? If Perry does not know who he is, it seems he could know exactly which individual is making a mess, and know every bit of information about this individual down to the last detail – and thereby, it seems, believe *that Perry is making a mess* – but not believe *himself* to be this individual.

We have focused on the singular proposition *that Perry is making a mess*, but we will briefly consider another. For example, we might want to identify some token sensory or perceptual experience of Perry's, call it 'E', and say that he believes the proposition *that the subject of E is making a mess*.² This is a singular proposition about E, not Perry. In addition to sharing some of the difficulties just discussed, there is good reason to think this suggestion lacks an important sort of psychological realism. Certainly, Perry can think to himself 'I am making a mess' without identifying himself as the unique person who is having a particular experience. So, this sort of proposition is also ill-suited to play the explanatory role that Perry's *de se* belief in fact plays.

We might try to solve the problem along explicitly Fregean lines. When Frege discussed the sense of the word 'I', he maintained that "every one is presented to himself in a special and primitive way in which he is presented to no one else" (1918 [1988]: 42). Applied to Perry's *de se* belief, this suggests that the content is a proposition that only Perry could believe, in virtue of its containing a sense that only Perry could grasp. This in turn seems to suggest that the sense, or mode of presentation, does not contribute purely descriptive information to the proposition. (If the proposition were purely descriptive, we would have the problems for that view discussed above.)

² Cf. Higginbotham (2003 [2009]).

So, on this account, what Perry believes is a proposition that contains his *self concept* – i.e., a non-qualitative mode of presentation that presents or determines Perry, but not in virtue of any descriptive fit – and the sense of ‘is making a mess’. In addition to postulating first-person propositions, which Perry wishes to avoid,³ this strategy requires a clear account of non-descriptive modes of presentation and how they determine subjects as their referents.

We turn now to Perry’s solution to the puzzle. Perry makes a distinction between *what* he believed, and the *belief state* in virtue of which he believed it, one that led him to examine the sack of sugar in his cart, and one we might individuate by using the sentence ‘I am making a mess’. In the case of the messy shopper, what explains Perry’s clean-up behavior is his coming to be in *this belief state*. Before the truth dawned on him, Perry might have believed the proposition *that Perry is making a mess*, but only in virtue of being in a different belief state (perhaps one individuated by ‘He is making a mess’, if Perry had pointed to the man in the supermarket mirror). What explains Perry’s behavior, then, is a change in his belief state, and not his coming to believe a new proposition.

Perry’s account solves the psychological problem of *de se* belief by rejecting the presumption that we need to identify a proposition that can serve as *de se* content. On his view, this role is played by belief states rather than propositions. The account also gives an answer to Geach’s problem about shared *de se* belief. People who share *de se* beliefs are in the same belief state – for example, the belief state that might lead each one to say ‘I am clever’ – despite believing different propositions. Perry (1979) does not explicitly address the linguistic problem, but his view suggests an answer. A *de se* attribution of belief – such as an utterance of ‘Perry believes that he himself is making a mess’ – might be claimed to contain information not only about the alleged object of belief, but about the belief state as well. For example, it might contain the information that the belief state is one that is individuated by the sentence ‘I am making a mess’.⁴

2.3 Lewis

In his seminal 1979 paper ‘Attitudes *De Dicto* and *De Se*’, David Lewis argues that the belief relation and, more generally, the relations that comprise our cognitive attitudes, relate us to properties instead of propositions. Properties are akin to what Perry (1979) calls *relativized propositions*, which are not true or false *simpliciter* but are true or false at-a-person (-and-time). For example, the property of making a mess is true at, or true of, each

³ See also Perry (1977).

⁴ See Richard (1983) for an account like this, which employs sentence-meanings instead of sentences.

person who is making a mess. Perry argued cogently that relativized propositions cannot serve as *de se* contents, but he presupposed the traditional conception of belief as something like inward assent to a proposition. Lewis, however, takes the belief relation to be in a way necessarily reflexive – to believe something is to take-yourself-to-have some property. He calls this relation *self-ascription*. So, for example, when Perry believes that he himself is making a mess, what he does is self-ascribe the property of making a mess.⁵

Lewis uses the extraordinary case of the two gods to motivate his account:

Consider the case of the two gods. They inhabit a certain possible world, and they know exactly which world it is. Therefore they know every proposition that is true at their world. Insofar as knowledge is a propositional attitude, they are omniscient. Still I can imagine them to suffer ignorance: neither one knows which of the two he is. They are not exactly alike. One lives on top of the tallest mountain and throws down manna; the other lives on top of the coldest mountain and throws down thunderbolts. Neither one knows whether he lives on the tallest mountain or on the coldest mountain; nor whether he throws manna or thunderbolts. (1979: 520-21)

It does seem that the gods “inhabit a certain possible world,” i.e., that this is a metaphysically possible scenario. How could the gods suffer ignorance? Well, we can imagine that the gods always have qualitatively identical experiences. Lewis suggests that the gods might lack the beliefs that they do because “they have an equally perfect view of every part of their world, and hence cannot identify the perspectives from which they view it” (1979: 521). This seems possible, and if it were the case, then neither perspective would allow its subject to identify his own spatial location. Since the gods believe every proposition that is true at their world but could still truly believe more than they in fact do, the contents of the missing beliefs could not be propositions. They must instead be properties that the gods are unable to self-ascribe. It might seem plausible to think that if the content of a belief is not a proposition, then it is a property (or something *very* much like a property). One way to have a true belief is to take yourself to have a property that you do in fact have. On Lewis’ view, if the god on the tallest mountain were somehow to come to believe that he himself lived on the tallest mountain, his belief would consist in his self-ascribing the property of living on the tallest mountain. We have in this case a kind of “property ignorance” despite propositional omniscience.

On Lewis’ account, the belief relation exhibits a kind of necessary reflexivity, and the verb ‘believes’ can roughly be paraphrased by ‘believes oneself to have’. The account is extended from *de se* belief to *de se* attitudes

⁵ Chisholm (1979, 1981) argues for and develops a view very close to that of Lewis.

in general. For example, the desire to be a millionaire is understood in terms of the subject bearing the appropriate cognitive relation – the analogue of self-ascription for desire – to the property of being a millionaire (of the subject’s wanting-to-have this property). Moreover, the account is also extended away from paradigm examples of *de se* attitudes, so that *de dicto* beliefs, for example, are also treated as self-ascriptions of properties. For instance, believing the proposition that all squares are rectangles is viewed as self-ascribing the corresponding property of being such that all squares are rectangles. So, *de dicto* attitudes are subsumed under *de se* ones.

On the view proposed by Lewis, then, to have a cognitive attitude is to bear the psychologically appropriate relation to a property. To believe something is to self-ascribe a property, to desire something is to want-to-have a property, and so on. The property is the content of the attitude. The content of Perry’s *de se* belief that he himself is making a mess, for example, is simply the property of making a mess. There is no *de se* element, indexical ingredient, or self-concept in the content of the belief. What makes the attitude *de se* is built into the attitude instead of the content of the attitude. Here the attitude is self-ascription, and it is in virtue of self-ascribing the property of making a mess that Perry’s belief is *de se*.

Like Perry, Lewis solves the psychological problem of *de se* belief by rejecting the presumption that we need to identify a proposition that can serve as *de se* content. Unlike Perry, he retains the idea that belief is ultimately analyzable in terms of a two-place relation. Lewis’ account also offers a straightforward solution to Geach’s problem of shared *de se* belief. Every person who believes himself to be clever self-ascribes the property of being clever, and so all such people have beliefs with the very same content.

The account provides the resources to solve the linguistic problem. Consider (1) and (4) from section 1 above, repeated here:

- (1) Obama believes that Obama is tall.
- (4) Obama believes that he himself is tall.

Lewis can say that an utterance of (4) is true if and only if Obama self-ascribes the property of being tall. The *that*-clause in (4) might be taken to denote this property.⁶ But (1) does not have Obama self-ascribing the property of being tall. Instead, we might take an utterance of (1) to be true if and only if Obama self-ascribes the property of being such that Obama is tall. Lewis himself would take an utterance of (4) to assert that there is some relation of acquaintance *R* – looking at, reading about, remembering, looking at a photograph of – such that Obama stands in *R* to Obama, and Obama self-ascribes the property of standing in *R* to someone who is tall.⁷ We can-

⁶ See Chierchia (1989).

⁷ The non-*de se* reading of (3) above receives the same treatment.

not go into these details here, but either way there is a semantic difference between (1) and (4).

2.4 Stalnaker

Robert Stalnaker, in his 1981 paper ‘Indexical Belief’, defends the idea that belief is simply a two-place relation between subjects and propositions from arguments based on cases of *de se* belief (and indexical belief more generally). Like Lewis, Stalnaker takes propositions to be sets of worlds, but Stalnaker rejects Lewis’ analysis of the case of the two gods. To get clear on Stalnaker’s view, it will be helpful to consider his analysis of this case. Remember that this is a case of ignorance of *de se* information, in that neither god knows his location in ordinary space. According to Stalnaker, if we suppose that the gods really are ignorant in this way, we must reject Lewis’ stipulation that they know every proposition that is true at their world. As Stalnaker sees it, the two gods case is

a case of ignorance of which of two indiscernible possible worlds is actual. One of these possible worlds is the actual world (assuming that the theologian’s story is true), while the other is like it except that the god who is in fact on the tallest mountain is instead on the coldest mountain, with all the properties which the god on the coldest mountain in fact has. (1981: 143)

Let’s call the world that Lewis describes ‘*W*’. Let’s also use ‘*TM*’ and ‘*CM*’ as names for the god on the tallest mountain in *W*, and the god on the coldest mountain in *W*, respectively. According to Stalnaker, there is a world that is qualitatively exactly like *W*, but differs in that the gods have swapped places and properties. Let’s call this world ‘*V*’. So, in *V*, *TM* is on the coldest mountain and *CM* is on the tallest mountain. If *TM* is ignorant in *W* about his location, then he does not know which of *W* or *V* is actual. On Stalnaker’s view, then, he is ignorant of at least one proposition (one that is true at *W* but false at *V*). The upshot is Lewis cannot claim both that the gods are ignorant about their locations, and also that they are omniscient with respect to *all* propositions.

Stalnaker’s account uses a doctrine called ‘haecceitism’ and a technique called ‘diagonalization’. Haecceitism, roughly, is the view that objects have non-qualitative essences, but do not have any qualitative properties essentially. This allows *TM* to inhabit world *V* with all the qualitative properties and relations that *CM* has in *W*: living on the coldest mountain, throwing thunderbolts, and so on. What makes him *TM* there is his non-qualitative haecceity, the property of being *TM*.

Diagonalization can be illustrated by considering the following sentence:

(9) I live on the tallest mountain.

In world W , an utterance of (9) by TM would express a proposition that is true at W but false at V , since his token of ‘I’ rigidly designates himself and he lives on the tallest mountain in W but not in V . In world V , too, an utterance of (9) by TM would express a proposition that is true at W but false at V . Supposing that W and V are the only worlds relevant to attributing attitudes to TM in the present context, we can form a matrix, or *propositional concept*, of (9) like this:

	W	V
W	T	F
V	T	F

Here, the *diagonal proposition* is true at W but false at V . (The same goes for the horizontal propositions here, but we will soon see an example where they differ from the diagonal proposition.) According to Stalnaker, this diagonal proposition is the belief that TM would express by uttering a token of (9). It is the belief that we would attribute to TM if we were to say he believes that he himself lives on the tallest mountain. On Stalnaker’s view, if TM can distinguish W from V , he would know this proposition and hence know his location. In this way, Stalnaker argues that Lewis cannot assume both that TM knows he is in W rather than V , and that he is ignorant of his location.

The example above might not make the point of diagonalization clear. So let’s consider another example. Suppose that in W , TM looks upon the world and somehow demonstrates the god on the tallest mountain, and while doing so utters a token of

(10) He lives on the tallest mountain.

What belief does TM express? By diagonalizing, Stalnaker arrives at the result that the content of this belief is the proposition that contains both W and V . In W , TM ’s utterance of (10) expresses a proposition that is true at W but false at V , since his token of ‘he’ rigidly designates TM , who lives on the tallest mountain in W but not in V . But his utterance of (10) occurs in V as well. In V , the utterance expresses a proposition that is true at V but false at W , since this token of ‘he’ rigidly designates CM , who lives on the tallest mountain in V but not in W . On this view, then, the content of the belief that TM expresses in uttering (10) is the diagonal proposition represented in the propositional concept below, which is true at W and V :

	W	V
W	T	F
V	F	T

Stalnaker thus objects to the two gods argument and defends the adequacy of propositions as contents for indexical belief. Stalnaker puts it like this: “One cannot just stipulate that the god knows that he is in *W* and not in *V*, for on the proposed explanation, that amounts to the assumption that he knows which mountain he is on” (1981: 144). We might balk at the kind of haecceitism that is presupposed here. We might also wonder, with Lewis, how *TM*’s knowledge of the proposition containing *W* but not *V* gives him the *de se* knowledge that he himself is on the tallest mountain. We might think, for example, that *TM*’s knowing that *TM* rather than *CM* is on the tallest mountain would give *TM* the relevant *de se* knowledge only if he also knows that he himself is *TM*. But we shall not pursue these issues here.⁸

Stalnaker’s view does provide a way of solving the problems of *de se* attitudes. On the linguistic side, Stalnaker accounts for the semantic difference between a *de se* attitude attribution and a non-*de se* attribution. (With the case of the two gods, we have been supposing that only possible worlds *W* and *V* need to be taken into account, which might be an oversimplification. In general, context (broadly construed) will determine which possible worlds need to be countenanced.) An utterance of ‘*TM* believes that he himself is on the tallest mountain’, for example, would express (in the imagined context) the proposition that is true at *W* but not *V*. But an utterance of ‘*TM* believes that he is on the tallest mountain’, given a non-*de se* reading associated with *TM*’s utterance of (10), would express the diagonal proposition that is true at both *W* and *V*.⁹

On the psychological side, Stalnaker holds that it is a mistake to think that no proposition adequately captures the content of a given *de se* attitude. In the context relevant to our discussion of the two gods case, for example, the proposition that is true at *W* but not *V* serves as the content of the *de se* information that *TM* lacks. In some sense, Stalnaker is reducing *de se* content to mere *de re* content, without the trappings of modes of presentation, guises, or the like.¹⁰ Perry’s *de se* belief that he himself is making a mess, for example, is true at a given world if Perry is making a mess there, and false otherwise (that is, if someone else is making a mess, or nobody is). This might give Stalnaker a way to approach Geach’s problem of shared *de se* belief – two people who intuitively have the same *de se* belief do not believe the same proposition, but each believes a proposition that depends for its truth on the very subject of belief, and not on whatever happens to satisfy some description or to be picked out by some mode of presentation.

⁸ See Lewis (1979), Stalnaker (1981) and Feit (2008: 34–42) for more discussion.

⁹ See Stalnaker (1981) for a discussion of his treatment of attributions with the proper name of the subject in an embedded context, for example ‘Lingens believes that Lingens is a cousin of a spy’. An utterance of this sentence, via diagonalization, has Lingens believing a proposition that is true if and only if ‘Lingens is a cousin of a spy’ expresses a truth.

¹⁰ See, for example, Higginbotham (2003 [2009]) for some discussion of this point.

This volume collects together sixteen new papers on *de se* attitudes. The papers in Part I deal primarily with issues concerning the linguistic problem of *de se* attitudes. The papers in Part II deal with issues concerning the psychological problem, or with closely related issues concerning the nature of *de se* attitudes and their place in our psychological lives. In the next section, we present short summaries of the collected papers.

3 Summaries of the Essays

3.1 Part One: Linguistics and Philosophy of Language

The problem of *de se* attitudes, according to Wayne Davis, is the problem of the essential indexical, an instance of Frege's problem, as applied to 'I'. It is both semantic (How does the meaning of 'I' differ from that of a coreferential proper name or definite description?) and psychological (How do the mental states we use 'I' to express differ from those we use coreferential names or descriptions to express?).

In his contribution to this volume, Davis reviews the limitations of character, self-attribution, and event-subject analyses. He then sketches a solution within the general theory that words are conventional signs of mental states, principally thoughts and concepts, and that meaning consists in their expression. On Davis' view, indexicals express thought parts ("indexical concepts") that are distinctive in the way they link to other mental events ("determinants"), either presentations or other concepts. Indexicals are distinguished in part by the pattern of uses they allow, which on his account are differentiated principally by determinants. Used deictically, 'I' expresses the speaker's self-concept, whose determinant is the speaker's introspective self-awareness. *De se* attitudes are those whose objects contain the subject's self-concept.

In his contribution, James Higginbotham begins by considering the view he defended on the issue of the first person pronoun. This view appeals to Donald Davidson's hypothetical event position (extending it to all predications, not just action sentences). On Higginbotham's view, we should say that a speaker using the first person refers to him/her self *as* the speaker $s(u)$ of his/her very utterance u (this view was earlier suggested in passing by John Perry). Under that circumstance, it makes no sense for one to ask of oneself, "But is it I who am speaking?" (*modulo* a couple of concessions in other work). This view requires giving up the idea that the content of a person's belief, as reported in 'John believes that p ' can be properly discriminated in purely modal terms – but Higginbotham suggests that it is not at all clear that anything is thereby lost.

However, the semantic issues in the context of speech and interpretation of speech come forward also in the context of belief, desire and the rest. Castañeda's examples (see section 2.1 above) extend to our steady cognitive

states: so your desire to eat a hamburger may not be the same as your desire that x eat a hamburger, even if x =you. This leads Higginbotham to consider a problem with his view and others: speech is deliberate action, so that we can ask of a person's reference to anything, how was it secured? But our doxastic, or epistemic, or desiderative states do not involve action at all. It follows, then, that if we are to take the first person in thought along the lines that he adumbrated for speech, we must conclude that many ordinary thoughts we have about ourselves must involve the capacity for thinking of ourselves as the possessors of these thoughts. But isn't that too fancy? After all, we mammals do pretty well in general in thinking about ourselves (and we have no problem in saying that the dog wants to eat the hamburger).

Higginbotham argues that Lewis' account faces the same problem. Lewis proposed that a first-person belief involved the self-ascription of a property. For instance, if you know that you are sitting down in an ordinary way, then you self-ascribe the property of inhabiting a possible world where you are sitting down. Well, Higginbotham asks, when a dog wants a hamburger, does it thereby prefer to inhabit a world in which it gets a hamburger? Higginbotham strives to make some progress on the problem raised by these questions.

In her contribution to this volume, Kasia Jaszczolt notes that early discussions of *de se* belief ascription focused on the status of the objects of attitudes and stemmed out of consolidated attempts to exorcise propositions and introduce properties and 'relations to oneself' instead. Propositions were revindicated via various rescue plans but the problem of compositional semantics of belief reports, including *de se* attributions, has remained a testing ground for semantic theories to this day. In her essay, Jaszczolt looks at *de se* belief reports in the light of the current debate between minimalism and contextualism in semantics. She argues that the differences in the reference-securing functions between *de re* and *de se* occur on the level of semantic content itself where the latter has to be understood as on contextualist accounts. The contextualist orientation is required for the essential ingredient of self-awareness to be included in the semantic representation. This representation, on Jaszczolt's account, is regarded as compositional in the contextualist sense of compositionality of meaning. In the course of her discussion Jaszczolt proposes some amendments to Chierchia's (1989) claim of the systematicity of retrieval of the cognitive access to oneself from the types of grammatical expressions, and discusses the different roles that the concepts of self-ascription, self-attribution, and self-awareness play in a contextualist semantic theory of *de se* belief reports.

Expression of self-awareness does not require a specific grammatical marker in English such as 'I' in *oratio recta* or (coreferential) '(s)he' in *oratio obliqua*, neither do such expressions come with guaranteed expression of self-awareness. There does not seem to be a lexical or grammatical

‘peg’ on which to hang the property of expressing self-awareness. On Jaszczolt’s view, sometimes the property is externalized through the grammar, at other times by default interpretations of this grammatical form, and at yet others by pragmatic resolution of the genuinely underspecified representation. The contextualist framework and pragmatic compositionality embraced by Default Semantics (Jaszczolt 2005, 2010) allow for this diversity.

In his contribution, Neil Feit develops an account of the truth conditions and propositions expressed by cognitive attitude reports, with a focus on belief reports in particular. Feit’s account makes use of the property theory of mental content, which denies the traditional view that the contents of our beliefs and other attitudes are propositions. Instead, the property theory takes such contents to be properties, that is, entities without truth values that are constant across persons and other objects, places, and times. The property theory is built for *de se* belief. For example, if Feit believes that he himself is a philosopher, the content of his belief is simply the property of being a philosopher. On this account, there is no *de se* element in the content of the belief. What makes the belief *de se* is a matter of the attitude itself and not its content. The attitude is self-ascription, and it is in virtue of self-ascribing the property of being a philosopher that Feit’s belief is *de se*. To self-ascribe a property is, roughly, to reflexively believe-oneself-to-have that property.

The first section of Feit’s essay has to do with *de se* belief reports, the second with belief reports that contain embedded proper names or natural kind terms, and the third with what might be described as reports of purely *de dicto* belief. In the fourth section, Feit suggests some ideas for unifying the accounts offered in the first three sections, and turns to the logical form of belief reports and the sort of proposition they express. The result is a contextualist account according to which *that*-clauses merely characterize (rather than specify) belief content, but on which their semantic contents enter into logical form along with contextually-supplied information about how the subject is related to certain salient semantic values.

As the existence of this volume and most of its essays indicate, the received wisdom is that *de se* thoughts and their ascriptions are particularly problematic. In his contribution, however, Michael Devitt argues that this is a myth, an artifact of misguided philosophical approaches to the mind and semantics, particularly the positing of Platonic propositions. A theory of thoughts and a theory of their ascriptions, Devitt argues, must be related. Appealing to Quinean naturalism and Occam, he argues for the explanatory priority of the theory of thoughts. Assuming the Representational Theory of the Mind, he takes mental representations, not propositions, to be the “objects of thoughts”. From this basis, he offers suggestions about thoughts in standard and “puzzle” situations: Kripke’s Paderewski, Richard’s phone

booth, and the *de se*. These suggestions are far from a complete theory of thoughts, Devitt concedes, but he stresses that they are sufficient to show that there is nothing particularly problematic about *de se* thoughts.

In light of this, Devitt considers ascriptions of thoughts. He concludes that there is nothing particularly problematic about the ascription of *de se* thoughts either. Throughout his essay, he emphasizes that both languages and minds are parts of the natural world, interacting causally with other parts of that world. Devitt argues that it is hard to see how Platonic propositions, the root of the myth, could be a part of that world. In any case, he finds no need to posit them.

In their contribution to this volume, Denis Delfitto and Gaetano Fiorin argue for a certain sort of descriptive account of indexicals. They note that in the tradition initiated by Kaplan, two main claims are associated with indexicality: (i) indexicals cannot be treated as concealed descriptions ('I' is not equivalent to 'the speaker in the context of utterance', or any other suitable description) and (ii) indexicals are referentially rigid (in the sense that they refer to the same object in all possible worlds). It follows from these two facts that the *subjective* meaning of indexicals cannot be expressed propositionally: the sentences 'his pants are on fire' and 'my pants are on fire' express the very same singular proposition as long as 'I' and 'he' refer to the same object. The case against a descriptive analysis of indexicals is that, if indexicals were treated as descriptions, the sentence 'If I were not speaking, then p' would be predicted to be truth-conditionally equivalent to the sentence 'If the speaker were not speaking, p', contrary to facts.

According to Delfitto and Fiorin, however, the price to pay for abandoning the descriptive analysis of indexicals is high. Meaning is no longer propositional in nature, in the sense that sentences containing indexicals cannot be reduced to functions from worlds to truth-values. They argue that indexicals can be treated as descriptions as long as their descriptive content is treated presuppositionally. As a consequence, the informativeness of indexical sentences can be expressed in terms of (partial) propositions. They go on argue that indexical presuppositions are special in that their scope is constrained by independently motivated syntactic factors. The main result of their proposal is an account of shifted indexicals. It has been shown that, in a number of languages, the first person pronoun in an indirect report such as 'John said that I am a hero' can be interpreted as referring to the subject of the reported speech act and that, on such a reading, the report is unambiguously *de se*. On their approach, the *de se* interpretation of shifted indexicals is the result of a syntax-driven process of "local" resolution of the presupposition of 'I', which forces the descriptive content of 'I' to remain within the scope of the verb of speech. Finally, they extend the presupposi-

tional analysis of indexical terms to definite descriptions and show that it accounts for attitudes *de re* in general.

Yan Huang, in his contribution, considers the pragmatics of attributions of *de se* beliefs from a third-person point of view. As we have seen above, Castañeda created an artificial pronoun *he*/she*/it** to encode the attribution of a *de se* belief from a third-person perspective. He called this artificial pronoun a ‘quasi-indicator’ and claimed that it is the only device that allows the marking of *de se* belief from a third-person viewpoint. Huang’s essay has two goals. First, he examines two types of linguistic expressions: (i) logophoric expressions in West African languages, and (ii) long-distance reflexives in East, South, and Southeast Asian languages, showing that both can function as quasi-indicators in Castañeda’s sense. Second, given that quasi-indicators are largely a pragmatic phenomenon, Huang provides a formal pragmatic analysis of the marking of *de se* attribution by logophoric expressions in West African languages and long-distance reflexives in East, South, and Southeast Asian languages (and the related use of regular expressions/pronouns in these languages) in terms of the version of the neo-Gricean pragmatic theory of anaphora developed by Huang, using the three general pragmatic principles proposed by Levinson (2000), namely the Q-, I- and M-principles.

In his contribution, Eros Corazza begins by discussing some linguistic data favoring the *de re* / *de se* distinction. In so doing he focuses on the different way epithets (e.g., ‘the bastard’, ‘the imbecile’) and quasi-indicators (e.g., ‘s/he her/himself’) behave when they appear in psychological characterizations. He argues that they often work like attributive anaphors. The quasi-indicator ‘she herself’ in ‘Jane₁ believes that *she (herself)*₁ is rich’ inherits its value from ‘Jane’ and *attributes* an ‘I’-thought to Jane. The epithet ‘the bastard’ in ‘Jane planned to marry Jon₁, but *the bastard*₁ ran away’ also inherits its value from ‘Jon’ and *attributes* the property of being a bastard to Jon. Corazza shows how the ungrammaticality of sentences like ‘*Jon₁ claimed/ said/ thinks/... that *the bastard*₁ was honest’) does not threaten the view that epithets can be understood as anaphoric pronouns. Their ungrammaticality rests on the fact that the epithet is embedded in what should be a *de se* attribution (e.g. ‘Jon₁ claimed/ said/ thinks/... that *he (himself)*₁ was honest’) while its nature is to contribute to the expression of a *de re* attribution. This also helps to understand the ungrammaticality of ‘*Jane₁ said/ thinks/ promised/... that *the imbecile*₁ will come’ vs. the grammaticality of ‘Jane₁ said/ thinks/ promised/... that *she (herself)*₁ will come’ on the one hand, and the ungrammaticality of ‘*Jon₁ ran over a man who was trying to give *him (himself)*₁ directions’ vs. the grammaticality of ‘Jon₁ ran over a man who was trying to give *the idiot*₁ directions’ on the other hand.

These linguistic data, on Corazza's view, can be accounted for by referring to discourse consideration involving the notions of point of view, perspective and empathy. He argues that empathy is central to the distinction between *de se* and *de re* construals, and that the difference in behavior between an epithet and a quasi-indicator is best accounted for by focusing on such a notion. When the reporter empathizes with the attributee s/he is unlikely to use an epithet in characterizing the attributee. Empathy is also important to Corazza's defense of the view that in a psychological characterization an epithet forces the *de re* reading, while a quasi-indicator triggers the *de se* one.

Finally, in his contribution, Alessandro Capone discusses various philosophical theories of *de se* attitudes and explores a bifurcation of the ideas of two major theorists on them. He defends the idea that the ego-concept is an essential element of *de se* thoughts. Furthermore, Capone defends the claim that pragmatic intrusion is involved in *de se* constructions: the ego-concept being a component of the *de se* thought. He defends this idea from a number of objections. He then explores the related notion of immunity to error through misidentification, and argues that this too depends on pragmatic intrusion. After defending this view from obvious objections, Capone arrives at the conclusion that immunity to error through misidentification is both an epistemological and a semantic phenomenon, and also that its semantics has interesting epistemological implications.

3.2 Part Two: Epistemology and Metaphysics

In his contribution, Igor Douven begins with the observation that the distinction between beliefs held about oneself *de se*, and beliefs held about oneself merely *de re*, has led some theorists to abandon the traditional conception of propositions as sets of possible worlds, and has led others to deny that belief is a two-place relation between a subject and a proposition. Like Devitt, Douven argues that *de se* beliefs do not pose any special problems with respect to theorizing about cognitive attitudes. Unlike Devitt, however, Douven suggests that we can account for *de se* attitudes within the traditional framework of propositions. Douven argues that the *de se* / *de re* distinction warrants revision neither of the concept of proposition nor of that of belief, and that the distinction can be fully captured in terms of differences in the kinds of evidence needed to warrant reports of the distinct types of belief. On Douven's account, the distinction between *de se* attitudes and those that are merely *de re* depends on the justification conditions that attach to certain attitude-ascribing propositions.

In his contribution, Darren Bradley argues along several lines that beliefs can be characterized in one way that allows their truth values to change over time, and in another way that does not. Suppose for example that you previously believed it was Sunday, and now believe it is Monday. What are

the implications of this truism for the philosophy of mind, and in particular, for the question of whether beliefs have eternal truth-values? Eternalists hold that beliefs have eternal truth values, temporalists hold that they do not (Bradley calls both of these *one-dimensional theories*). On the other hand, two-dimensionalists (e.g., Perry 1979, Chalmers 2002) hold that we need not choose – beliefs have both eternal and temporal components. Bradley defends two-dimensionalism over one-dimensionalism, and specifically, over temporalism.

Two-dimensionalism is a more complex and less unified theory, and as a result the burden is on the two-dimensionalist to show that the extra complexity is worth the cost. Bradley argues that two-dimensionalism buys us an ontology of *dynamic beliefs*. These are beliefs that survive as time passes, even though their linguistic expression might change. This allows us to say that the earlier belief that it *is* Sunday, and the later belief that it *was* Sunday, are the very same belief. Two-dimensionalism offers a less unified theory, but it offers more unified beliefs, and Bradley argues that these unified beliefs are needed to give a natural account of belief retention.

Bradley appeals to certain tensions within Frege's writings, as he struggled to find a single object of belief that played all the roles beliefs are supposed to play. He defends two-dimensionalism from a criticism that can be extrapolated from Lewis (1980b). Finally, he argues that two-dimensionalism is independently motivated by considerations from confirmation theory – the two dimensions correspond to two rules of belief update – and so he argues that this is a case where epistemology informs philosophy of mind.

Michael Titelbaum, in his contribution, argues that while *de se* degrees of belief create special problems for traditional Bayesian updating, these problems can be resolved without first committing to a particular theory of *de se* content. He does this by outlining a new credence-updating scheme that, instead of working directly with the contents of an agent's doxastic attitudes, works with the agent's willingness to affirm linguistic sentences in contexts. This approach utilizes an element (truth-values of linguistic sentences in contexts) common to all theories of *de se* content. Crucial to Titelbaum's strategy is a new, epistemic notion of context-sensitivity. He argues that epistemically context-sensitive sentences are the ones that cause trouble for traditional Bayesian Conditionalization.

Having identified the troublemakers for the traditional Bayesian updating rule, Titelbaum describes a new updating scheme that solves various decision-theoretic conundrums like the Sleeping Beauty Problem. Finally, Titelbaum suggests that although he has made no assumptions about the theory of content in constructing his updating scheme, the answers that scheme gives to problems like the Sleeping Beauty Problem may leave some theories of content looking more plausible than others. In particular,

there may be trouble for Lewisian theories on which ‘I’m awake today’ has the same content on Tuesday as it does on Monday.

In his contribution, Pietro Perconti argues that first-person beliefs have an essentially indexical nature, and moreover that only such beliefs can have a genuine motivational force in our behavior. Perconti distinguishes the motivational power that a given belief might have, and its causal role in behaviour. He goes on to argue that the motivational power of a belief is, in a certain way, a linguistic state of affairs.

If we take into account justifications people have for their actions, according to Perconti, we can see that only first-person beliefs are endowed with motivational force. In order to achieve this power, all the other kinds of beliefs must be transformed into first-person beliefs. The reference of first-person beliefs depends on a specific mode of presentation of first-person bodily perspective, which is specifically realized in the human brain. On Perconti’s view, the brain represents the body in a direct and specific way, without any attribution of a property to oneself or the mastery of a self-concept. The word ‘I’ and similar “pure” indexicals are taken to be the linguistic counterparts of the cognitive processes that the human brain uses to shape bodily self-representation.

Michael Nelson, in his contribution, argues for a relativist account of temporal thought and a contextualist account of first-personal thought. Time, on this sort of view, serves as an index of truth. One thinks the same thought yesterday that one thinks today in saying to oneself, ‘It is Monday’. That same thought is true at the date that is yesterday and false at the date that is today. A proposition is true or false at a time, and can have different truth values at different times. Person, on the other hand, enters into the content of the proposition thought. Susan and Sally think different thoughts when each says to herself, ‘I am hungry’, Susan thinking a thought about herself and Sally a thought about herself. These propositions are then true or false indifferently across different people. On Nelson’s view, time serves as a parameter of truth, but persons do not.

Nelson argues that the existent linguistic and psychological arguments for and against contextualist and relativist accounts are unpersuasive. He then argues that there are metaphysical reasons for thinking that the constitution of reality is time relative, but person absolute. A fact obtains, Nelson argues, at a time but not at a person. The truth and falsity of propositions should mirror the obtaining of facts. So, he concludes, propositional truth is time but not person relative.

In the final contribution, John Perry uses self-locating beliefs to argue against a simple account of belief, according to which belief consists merely in an agent at a time believing a proposition. Perry argues that a more complex view makes better sense of self-locating beliefs among other phenomena. On this view, a belief is an internal mental representation – a particular

structure of ideas in the mind – with a certain proposition as its content but also with truth-conditions that are distinct from those of the proposition.

A belief is self-locating provided that its truth constrains the location or features of the believer. On Perry's version of the complex view, certain ideas of objects – called *notions* – are sensitive to information about those objects and the roles they play in our cognitive lives. This helps to explain the self-locating nature of the beliefs of which these notions are a part. In the case of *de se* belief, our self-notions are sensitive to information about ourselves in a way that accounts for the sort of belief about oneself that ordinary self-knowledge requires. Perry argues that one cannot have a belief of this sort without a role-based idea of oneself (i.e., a self-notion). This serves as the basis for an objection to the Lewisian view, on which a self-notion need not be part of a *de se* belief.

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